US DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS OFFICE

ORO Technical Qualification Program (TQP)
Phase I Assessment Report

(A Supplement to the September 1997 TQP Assessment Report)

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Executive Summary

In response to the Defense Nuclear Facilities Safety Board Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*, the Department of Energy (DOE) adopted a formal qualification program in the 93-3 Implementation Plan. In March 1998, at the request of the Board, DOE revised its implementation plan to address current DOE issues and initiatives. This revised plan also specified the conduct of the Phase I assessment of the effectiveness of the implementation of the Technical Qualification Program (TQP) at the Oak Ridge Operations Office (ORO). This Phase I assessment supplements ORO's formal assessment of the TQP completed in September 1997. The results of this current assessment are to be incorporated into the ORO TQP Plan.

Reflecting the requirements and guidance provided in *Revised Implementation Plan for Improving DOE Technical Capability in Defense Nuclear Facilities Programs*, DOE Order 360.1, *Training,* and ORO O 360, *Employee Education and Training*, this assessment approach addressed each of the TQP assessment objectives and criteria (shown in Appendix H) and consisted of a review of program documents and records and interviews with TQP principals, participants, their supervisors, and ORO management. The resulting information and data has been analyzed, prioritized, and organized into the body of this report. In addition, supporting information and statistics are noted in the Appendices.

The TQP program implementation at ORO continues to be satisfactory. Over 110 of the 162 program participants have completed their qualification and have received certificates of completion. There is a high level of confidence among managers and staff that program participants will meet the May 1999 and beyond scheduled completion dates. The primary concern the assessment team has with implementation of ORO's TQP is the apparent lack of action in response to the 1997 TQP Assessment Report recommendations. Other conclusions, including those that remain applicable from the 1997 assessment, are as follows:

- The support to the TQP participants by the Training and Development Group (TDG) was considered very positive by most interviewees and outstanding by others.
- In support of ORO management, TDG took a minimalist approach in formalizing by way of procedure how the site would implement the TQP. However, the programmatic support today is very dependent on one person.
- TQP participants are enrolling in few technical courses as part of their continuing training.
- The federal employees enrolled in the TQP possess impressive technical credentials.

The general recommendations shown below reflect the findings from this assessment.

- ORO management should review and respond to the recommendations to this and the 1997 Assessment Report.
- ORO should revise ORO 360 to give more specific direction on how TQP participants should be identified.
- As the mission of ORO continues to evolve, ORO management should relook at TQP participation across ORO to assure that the correct employees are in the TQP.
- TDG should review the current administrative guidance to site organizations for managing this program and make needed changes.
- TDG should continue to audit the TQP documentation in the records center for technical accuracy, adequacy, completeness, and legibility.

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I. Introduction

In response to the Defense Nuclear Facilities Safety Board Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs,* the Department of Energy (DOE) adopted a formal qualification program in the 93-3 implementation plan. This qualification program applies to headquarters and field element technical employees who provide management oversight or technical guidance and whose actions or decisions could impact the safe operations of DOE defense nuclear facilities.

The Technical Qualification Program (TQP) was formalized in May 1995 by DOE Order and the issuance of approximately 24 Department-wide qualification standards approved for use by senior management. The Oak Ridge Operations Office (ORO) has currently enrolled about 160 of its federal staff, including managers, supervisors, and individual contributors, to participate in the program. Many were initially selected in late summer and early fall of 1995. Following that time, the Training and Development Group (TDG) (known as the Training and Development Division at that time) conducted a series of workshops to brief participants on the TQP and the Technical Qualification Record (TQR) and its use. TDG provided the participants with job aids, forms, and assistance to make selections and document their decisions. Additional participants, such as those named as Senior Technical Safety Managers and managers and staff in the Safeguards and Security Division, came into the program in late calendar year 1996 and early 1997.

In March 1998, at the request of the Board, DOE revised its implementation plan to include and reflect current DOE issues and initiatives. This revised plan also specified the conduct of the Phase I assessment of the effectiveness of the implementation of the TQP at ORO. This Phase I assessment, announced to the site September 8, 1998 (see Appendix A), supplements ORO's formal assessment of the TQP completed in September 1997. The Executive Summary of the September 1997 Assessment Report is shown in Appendix G. The results of this current assessment are to be incorporated into the ORO TQP Plan.

The purpose of this assessment is to evaluate the effectiveness of ORO's TQP, the implementation of which is specified in the requirements and guidance provided in the *Revised Implementation Plan for Improving DOE Technical Capability in Defense Nuclear Facilities Programs*, DOE Order 360.1, *Training,* and ORO O 360, *Employee Education and Training*.

The following sections of this report address the assessment scope and methodology, the results of the assessment--presented in summary and by each assessment criterion--conclusions and recommendations, and supporting information and statistics.

II. Scope and Methodology

The scope and methodology of this assessment are based on the *Technical Qualification Program Assessment Guidance and Criteria,* which was developed by the Federal Technical Capability Panel and the Office of Human Resources and Administration, and is a companion document to the *Revised Implementation Plan for Improving DOE Technical Capability in Defense Nuclear Facilities Programs.*

Specifically, the scope of this assessment is to supplement the comprehensive assessment conducted in September 1997 that included a review and assessment of the TQP processes used, the program decisions made, and the records and documentation associated with the qualification of federal technical employees with safety responsibilities at defense nuclear facilities.

The general methodology of this assessment consisted of a review of program documents and records, and interviews with TQP principals, participants, their supervisors, and ORO management. A detailed assessment plan (see Appendix B) was developed to address each of the TQP assessment objectives and criteria (shown in Appendix H). This assessment plan was used initially as a guide; actual assessment activities are documented on the data sheets contained in Section III. Further, as each criterion was being assessed, the corresponding or related criterion from the September 1997 assessment was also reviewed for current applicability and a determination of whether more research and data was needed. This way, the findings of the 1997 assessment could be either reconfirmed or repudiated. The resulting information and data was then analyzed, prioritized, and organized into the body of this report. In addition, supporting information and statistics have been noted in the Appendices. The seven primary objectives addressed in this assessment, reflecting the above guidance, encompass the following general elements of the TQP:

- Demonstration of competence
- Competency levels
- Plans and procedures
- Qualification tailored to work activities
- Credit for existing technical qualification programs
- Transportability
- Measurable

Augmenting these objectives, ORO added a criterion within the fifth objective above to assess the adequacy of its TQP exemption process.

The assessment was conducted by a team led by Mr. Dennis Boggs, that included Mr. Steven Richardson (as the Federal Technical Capability Panel representative), Mr. Michael Henderson, Mr. James Vosburg, and Dr. Randall Spinney.

III. Results

As noted earlier, the TQP Phase I Assessment Plan shown in Appendix B was used as a guide for initiating the assessment activities. The actual assessment approach was documented by the team members on each of the 24 data (or criterion) sheets contained in this section. The following summary and detailed results were based on:

- A review of the training and qualification records for 18 individuals randomly selected from the TQP roster. A records review checklist (see Appendix C) was used to record the information gleaned from the record review. Initially, the team selected 17 individuals using random number tables, which would account for about 10% of the roster. This, combined with the 50 participant records sampled in the 1997 Assessment, would yield about 40% of the total number of participants whose records would have been reviewed. One additional record was reviewed during the course of the assessment resulting in the total of 18.

- A review of the interviews with 5 ORO senior managers, 13 manager participants, 3 TQP principals, and 8 staff participants. The interview sample was determined, in part by the team in order to accomplish the assessment plan, and to supplement the sample selected during the 1997 Assessment. Three sets of questions were developed (see Appendix D): one to use in discussions with ORO senior management, one for managers and supervisors, and one for staff members.

- A review of programmatic procedures, directives, job aids, ORO office- or facility-specific standards, databases, and correspondence that are used to describe, control, measure, or define how the ORO TQP is administered.

A. Summary of Results by Objective

TQP-1   **Demonstration of Competence:** The program clearly identifies and documents the process used to demonstrate employee technical competence.

This objective was met. According to the ORO senior managers and TQP participants and their supervisors, TQP participants had been chosen based on the positions that employees occupy and their ability to influence the safe operation of a defense nuclear facility. The specific guidance for identification of TQP candidates can be improved.

TQP-2   **Competency Levels:** Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.

This objective was met. The DOE-wide standards and competencies appear to reflect industry practices. However, though ORO's application of these standards conforms to the intent of the TQP requirements, the widespread use of exemptions indicates that the general technical base and functional area standards do not match the baseline and functional attributes of the job holders as may have been expected by the originators of these standards.

TQP-3   **Plans and Procedures:** Plans and/or procedures are developed and implemented to govern the administration of the program.

This objective was met. In general, senior managers appear to be committed to the TQP and have articulated their commitment through periodic discussions with their staff. The DOE Order O 360.1 and ORO O 360 combine to describe the TQP requirements and provide general guidance for the administration of the program.

TQP-4 **Qualification Tailored to Work Activities:** The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.

This objective was met. ORO takes a graded and tailoring approach to the application of the TQP in order to fit the TQP requirements to the needs of the jobholder.

TQP-5 **Credit for Existing Technical Qualification Program(s):** The program is structured to allow credit, where appropriate, for other technical qualification program accomplishments.

This objective was met. All equivalencies and exemptions were justified, approved by the appropriate management levels, and documented in accordance with the TQP implementing guidance. Justification statements can be improved in order to relate to specific competencies.

TQP-6 **Transportability:** Competency requirements that are identified as having Department-wide applicability are transferable.

This objective was met. ORO continues to focus on the qualification and competency of ORO defense nuclear facility technical staff. Should ORO hire a transfer from another DOE defense nuclear facility, that person's Technical Qualification Record (TQR) would be reviewed for transferability at that time.

TQP-7 **Measurable:** The program contains sufficient rigor to demonstrate compliance to the principles.

This objective (in particular, Criterion 7.2) was not met. No formal trackable actions have been taken on the recommendations from the 1997 TQP Assessment Report. Criteria 7.1 and 7.3 were met. The scope and depth of the evaluation of the participant's competency is dependent on the nature of their position. Sampled participants have taken an average of about 15 hours of technical continuing training in 1998.

B. Results by Objective and Criteria

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-1 Demonstration of Competence: The program clearly identifies and documents the process used to demonstrate employee technical competence.
CRITERIA: 1.1 At a minimum, personnel providing management direction or oversight that could impact the safe operation of a defense nuclear facility have been identified in the Technical Qualification Program.

APPROACH

- Reviewed the documented selection process.

- Interviewed selected senior managers regarding how they assign employees to the program and how they approve their employees' functional areas.

- Compared TQP roster with ORO organization chart. Checked whether TQP roster is complete.

- Randomly selected 18 records for review and for possible follow-up interviews, and determined participant completion status.

DISCUSSION

Clearly, ORO senior management must assure that the proper personnel are selected as participants in the TQP and that appropriate functional area standards are chosen for these participants. To assess whether these criteria are being met, several ORO senior managers were interviewed:

Jim Hall, Manager ORO
Ed Cumesty, Assistant Manager for Laboratories (AML)
Bob Dempsey, Assistant Manager for Defense Programs (AMDP)
Rod Nelson, Assistant Manager for Environmental Management (AMEM)
Bob Poe, Assistant Manager for Environment, Safety, and Quality (AMESQ)

Minimal specific direction is given in DOE O 360.1 (Chapter II, item 1.b) or ORO O 360 (Section 5, item a.(2).(a)) regarding who is selected to participate in the TQP.

In general, senior managers felt that TQP participants had been chosen based on the positions that employees occupy and their ability to influence the safe operation of a defense nuclear facility. Safeguards and Security personnel may be the one exception where apparently TQP participants were mandated by DOE-HQ. Also, the AML indicated he was not a TQP participant, but has been fully involved in administering the program.

Senior managers indicated they had worked with their direct reports to determine the appropriate functional area standard, and the direct reports in turn worked with the employees at large to determine the appropriate functional area standard for their position.

The overall status of TQP completion for September 1998 is 89%. The specific completion statistics by completion date and by organization are shown in Appendix E .

An initial comparison of the Technical Qualification Program (TQP) and ORO rosters yielded 59 persons who, at face value, possibly should have been on the TQP roster. There appeared to be some inconsistencies across ORO in the selection process. However, after interviewing selected ORO managers, many of the apparent inconsistencies were in fact

not. Rather, they were the result of deliberate decisions made early in the implementation of the TQP. One manager noted that because of his division's mission, which is mostly non-defense nuclear facility project work, that only some of the employees were selected for the TQP. This would permit these individuals to work on defense nuclear facility activities should the mission change.

Another manager indicated that the mission of his organization has changed to virtually all non-defense nuclear facility work. Those who were in the TQP at the time of this change were permitted to maintain or drop their participation in the program.

Some unexplainable inconsistencies remain regarding employees who are not in the TQP but possibly should be, and some employees who are in the TQP who possibly should not be.

These and other managers indicated that it may be prudent to relook at the TQP roster as the mission of ORO continues to evolve.

OBSERVATIONS-FINDINGS

1.1-1   ORO O 360, *Employee Education and Training*, does not provide specific direction on how TQP participants should be chosen.

1.1-2   These preceding observations are consistent with those made during the September 1997 assessment.

1.1-3   There is a lack of a formal process for Human Resources (HR) to update TDG on personnel changes.

1.1-4   There is a lack of "communication" between the LEARN and TQP databases, as evidenced by five people in TQP who no longer work for DOE and one person with a name change who was not factored into the TQP.

RECOMMENDATIONS

1.1-1   At the next opportunity, probably after the upcoming revision to DOE O 360.1, ORO should revise ORO O 360 to give more specific direction on how TQP participants should be chosen.

1.1-2   As the mission of ORO continues to evolve, ORO management should relook at TQP participation across ORO to assure that the correct employees are in the TQP.

1.1-3   TDG and HR management should ensure that personnel actions are incorporated into the TQP and LEARN databases and training and development records.

1.1-4   TDG should audit all the TQP records and update the records and TQP Tracker accordingly.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-1 Demonstration of Competence: The program clearly identifies and documents the process used to demonstrate employee technical competence.
CRITERIA: 1.2 Individual Development Plans (IDPs), training plans, technical qualification records, or other related documents are updated to reflect the activities that each individual shall participate in to satisfy competencies.

APPROACH

- Reviewed the updating process with TQP lead at TDG.

- Checked the dates of electronic files and entry dates of records.

DISCUSSION

The Technical Qualification Record (TQR) is the primary documentation tool of the TQP, although at least one organization relies on the Individual Development Plan (IDP) to track the needs and progress of the TQP participants.

For those TQP participants who have office computers or access to a computer, TDG has loaded "TQR Baseline" on their computers. TQR Baseline contains a blank TQR, including places for justification statements, applicable functional area and office/facility-specific (O/F-S) standards, and the DOE General Technical Base Standard. TQP participants who have the TQR Baseline loaded on their computers e-mail the TQP lead at TDG with any changes to their record, and forward hard copy evidential documentation. The Lead, in turn, uploads the file and runs a change report to capture the specific updates, and incorporates those into the TQP Tracker, which is a database of completion statistics. Similarly, the TQP participants who maintain only paper-copy records forward their updated completion records and accompanying supporting documentation to the TQP lead at TDG, who manually updates the TQP Tracker. Only three organizations continue to use paper copy TQRs.

As of this report, the TQP lead at TDG receives about two updates per month. During the two-month period preceding the May 1998 deadline, the lead was receiving about 6-7 updates per week.

OBSERVATIONS-FINDINGS

1.2-1   While the current updating process is running fairly smoothly, despite the recent resignation of the former TQP lead at TDG, there is no specific implementing guidance to ensure that the process is replicated consistently and reliably. This observation was also made in the September 1997 Assessment Report, whereby the success of the TQP administration was person dependent rather than process oriented.

RECOMMENDATION

1.2-1   TDG should formalize the TQP documentation updating process to ensure that assigned TDG staff can replicate the current process.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-1 Demonstration of Competence: The program clearly identifies and documents the process used to demonstrate employee technical competence.
CRITERIA: 1.3 A formal evaluation process is in place to objectively measure the technical competency of personnel. The rigor of the evaluation process is commensurate with the responsibilities of the position.

APPROACH

- Interviewed selected ORO senior managers, division directors, team leaders, and participants to determine their familiarity with and use of a formal evaluation process.

DISCUSSION

Clearly, ORO senior management must assure that an evaluation process is in place to objectively measure technical competency and that the rigor and formality of the process is commensurate with the responsibilities of the position. To assess whether these criteria are being met, several ORO senior managers were interviewed:

Jim Hall, Manager ORO
Ed Cumesty, Assistant Manager for Laboratories (AML)
Bob Dempsey, Assistant Manager for Defense Programs (AMDP)
Rod Nelson, Assistant Manager for Environmental Management (AMEM)
Bob Poe, Assistant Manager for Environment, Safety, and Quality (AMESQ)

The interviews revealed that a very rigorous and formal evaluation process exists for facility representatives. A less formal graded approach to evaluation appears to be generally used for all other TQP participants, such as the method that was used early in program implementation in the TQR notebooks, whereby supervisors signed off the developmental items for each competency in the notebook. Typically, the level of rigor and formality used in evaluations appears to depend on the participants' background, education, and experience, or, in some cases, the amount of developmental activities needed to complete qualification. This was substantiated during the interviews with division directors, team leaders, and participants.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-2 Competency Levels: Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.
CRITERIA: 2.1 Competency requirements include clearly defined knowledge, skill, and ability elements.

APPROACH

- Reviewed the basic, technical, and specific competencies and accompanying knowledge, skills, and abilities (KSAs) and compared them with industry standards.

- Interviewed a sampling of participants and asked if their jobs fit the functional area standards.

DISCUSSION

The review of the TQP participants' records showed that with the exception of 40 participants whose organizations did not develop office/facility-specific standards, all participants have included general technical base and DOE and office functional standard competencies.

As specified in DOE Order 360.1, *Training*, the general technical base and functional area standards "shall be based upon accepted industry practices." Given that the preparation of these standards were lead by Headquarters staff, the team surmises that they reflect industry practices. However, though ORO's application of these standards conforms to the intent of the TQP requirements, the widespread use of exemptions indicates that the general technical base and functional area standards do not match the baseline and functional attributes of the job holders as may have been expected by the originators of these standards. Specifically, 20% of the TQP participants have taken exemptions for the general technical base competencies, and 38% for the applicable functional area standard competencies.

Participants interviewed during this and the September 1997 assessment repeatedly pointed out that the baseline and functional area standards were by no means an exact fit to their jobs. To this end, ORO continues to take a graded approach to the assignment of standards and competencies to a candidate's technical qualification record. And for this reason, we have added a criteria (5.4) for exemptions under Objective 5, Credit for Existing Technical Qualification Program(s).

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM
PHASE I ASSESSMENT
OBJECTIVE: TQP-2 Competency Levels: Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.
CRITERIA: 2.2 Subject matter experts are involved in establishing competency requirements.

APPROACH

•   Reviewed how site position competencies are established and discussed the use of subject matter experts (SMEs) with TQP lead at TDG.

•   Reviewed the process or requirements for developing local qualification standards with TQP lead at TDG.

•   Discussed with selected SMEs their involvement in this process.

DISCUSSION

Interviews with the TQP lead and the manager of TDG confirm that SMEs from across DOE, including ORO, were used during the development of the general technical base and functional area standards. However, neither these two persons nor a point of contact in HR were able to recall the names of the subject matter experts from ORO.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-2 Competency Levels: Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.
CRITERIA: 2.3 Consideration of related professional certification requirements is included in the program as applicable.

APPROACH

• Reviewed how professional certifications are incorporated into the Individual Development Plans (IDPs) and Technical Qualification Records (TQRs).

• Reviewed participant records.

DISCUSSION

Professional certifications noted during the records review included such certifications as project manager, industrial hygienist, health physicist, and professional engineer. These certifications were used in the respective TQRs as either completion evidence or equivalency justification.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-2 Competency Levels: Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.
CRITERIA: 2.4 Competency requirements are identified in the areas listed below (Note: this does not imply that three separate documents are required). • **Basic Technical Knowledge** • **Technical Discipline Competency** • **Position Knowledge, Skills, and Abilities**

APPROACH

• Reviewed and verified that the basic, technical discipline, office and facility-specific (O/F-S) and position standards competencies have been developed, approved and assigned to TQP participants.

• Interviewed the TQP lead at TDG.

DISCUSSION

The basic, technical discipline, and O/F-S standards competencies have been developed, approved, and assigned to TQP participants. The assignment of competencies has been made based on best professional judgment by matching the basic and functional area standards with the candidates' jobs, according to the supervisors and managers interviewed.

A review of TQP Tracker revealed that all but 40 participants' TQRs contain these three levels of standards. These 40 of 162 (25%) participants do not have identified O/F-S standards. Yet, another 45 (28%) have more than just the general technical base, primary functional area, and O/F-S standards, which include secondary functional areas and multiple O/F-S competencies. The three organizations that did not develop O/F-S standards did so deliberately. Their staff are matrixed to several site organizations, and according to their management, are expected to acquire and attain the office/facility-specific standards for that organization. A review of TQP Tracker showed that 11 staff in the 3 organizations are assigned O/F-S competencies.

OBSERVATIONS-FINDINGS

2.4-1 The fact that 40 of 162 (25%) participants do not have identified O/F-S standards is not consistent with the apparent graded and tailoring approach that ORO is taking to the application of the TQP to fit the needs of the jobholder.

RECOMMENDATION

2.4-1 As the organizations review their constituency in the TQP (from Recommendation 1.1-2), they should reconsider the development and/or assignment of office/facility-specific standards.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-3 Plans and Procedures: Plans and/or procedures are developed and implemented to govern the administration of the program.
CRITERIA: 3.1 The Technical Qualification Program has the commitment of senior management.

APPROACH

- Interviewed ORO senior managers to determine if they endorse and are committed to the TQP, and asked about evidence of their commitment (e.g., staff memos, subordinates' performance plans).

DISCUSSION

Clearly, ORO senior management must be committed to the TQP for the program to be successful. To assess whether this criteria is being met, several ORO senior managers were interviewed:

Jim Hall, Manager ORO
Ed Cumesty, Assistant Manager for Laboratories (AML)
Bob Dempsey, Assistant Manager for Defense Programs (AMDP)
Rod Nelson, Assistant Manager for Environmental Management (AMEM)
Bob Poe, Assistant Manager for Environment, Safety, and Quality (AMESQ)

In general, senior managers appear to be committed to the TQP and have articulated their commitment through periodic discussions with their staff. The AML indicated he is not in the TQP, but that at least one of his three deputy site managers is in the program and formal responsibilities are carried out through this individual.

Written commitment evidence was not available. With possibly the exception of facility representatives, no one was aware of changes to employee position descriptions or performance plans as a result of participation in the TQP.

OBSERVATIONS-FINDINGS

3.1-1   Position descriptions and performance plans do not reflect TQP participation.

RECOMMENDATION

3.1-1   ORO should define what position description and performance plan changes are needed for TQP participants and implement those needed changes through the local order system or written direction.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-3 Plans and Procedures: Plans and/or procedures are developed and implemented to govern the administration of the program.
CRITERIA: 3.2 Written procedures that adequately define the processes and requirements to implement the Technical Qualification Program are in place.

APPROACH

- Reviewed DOE Order O 360.1, *Training*, and ORO O 360, *Employee Education and Training*.

- Interviewed the TQP lead at TDG about the local implementation guidance, policies, or procedures that define the TQP practices.

- Reviewed the 1997 TQP Assessment Report.

DISCUSSION

The DOE Order O 360.1 and ORO O 360 combine to describe the TQP requirements and provide general guidance for the administration of the Program. As also noted in the 1997 TQP Assessment, these two orders support TQP implementation by generally:

- Identifying personnel and/or positions;
- Developing office/facility-specific standards;
- Evaluating employees against the standards;
- Documenting competency exemptions and equivalencies;
- Establishing IDPs, training plans, or related training and qualification records; and
- Documenting satisfactory completion of learning activities to satisfy established competencies.

The TQP lead at TDG confirmed the use of these orders, and noted that the local order needs some updating to reflect current practices, such as using the TDG home page and TQR Baseline for enrolling in continuing training and documenting TQP fulfillment, respectively.

OBSERVATIONS-FINDINGS

3.2-1   While it appears that the DOE Order O 360.1 and ORO O 360 are sufficient to describe the TQP processes and roles, ORO O 360 may contain some obsolete information and areas needing clarification, such as that contained in sections 4.a.(2), 5.a.(1)(b), 5.a.(6)(a), and 5.a.(6)(c).

RECOMMENDATION

3.2-1   ORO should revise ORO O 360 to accurately define and portray the requirements of the TQP.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: **TQP-3 Plans and Procedures: Plans and/or procedures are developed and implemented to govern the administration of the program.**
CRITERIA: **3.3 Roles and responsibilities for the implementation of the Technical Qualification Program are clearly defined and understood by all involved.**

APPROACH

• Reviewed the roles and responsibilities that are defined in DOE Order O 360.1, *Training*, and ORO O 360, *Employee Education and Training*.

• Interviewed selected division directors, team leaders, and participants to verify their understanding of their roles, etc.

DISCUSSION

The Training and Development Group, the TQP lead at TDG, and TQP management seem to understand their roles as defined in the above procedures (Orders). TQP participants seem to respond to their supervisors' direction and complete their TQP competencies in a timely manner. This understanding was evidenced in the interviews by such comments as, "I can find my TQP roles and responsibilities in DOE 360.1 and ORO O 360," and "Training, various materials, and advice have been provided to me by the TDG which helped me understand my roles and responsibilities."

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-3 Plans and Procedures: Plans and/or procedures are developed and implemented to govern the administration of the program.
CRITERIA: 3.4 The procedures that govern the implementation of the Technical Qualification Program are understood by all involved, and are being implemented as written.

APPROACH

• Reviewed DOE Order O 360.1, *Training*, and ORO O 360, *Employee Education and Training*.

• Interviewed selected division directors, team leaders, and participants to verify their general awareness and use of the local guidance for TQP implementation.

DISCUSSION

DOE Order O 360.1, *Training*, and ORO O 360, *Employee Education and Training*, provide the procedural guidance in order to implement the TQP. Based on the interviews, the division directors and team leaders seem to understand and follow the TQP procedures. The TDG appears to follow and implement most portions of the TQP procedures. However, the participants have little knowledge of the procedures but are following their supervisors' instructions.

Interviews during this assessment and in the 1997 Assessment yielded the following examples of activities showing TQP implementation:

• Interviewees stated that most supervisors were involved with their IDPs and TQRs, especially early in TQP implementation. Some supervisors participated more than others. A few relied on TDG to support their staff.

• TDG conducted TQP workshops for the participants, loaded TQP Tracker software on most participants' computers, and developed an intranet site that contains the IDP worksheet.

• Regarding the evaluation of participant skills against the TQP competencies, "the forms provided by the Training Group were filled out by the participant. Each participant decided whether or not the particular element was applicable to their job. For those that did apply, it was necessary to assess our competency in each element based on education, experience, training, etc. Once completed, all of this was discussed with our supervisor who either agreed or disagreed with our assessment."

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-3 Plans and Procedures: Plans and/or procedures are developed and implemented to govern the administration of the program.
CRITERIA: 3.5 A training and qualification records system is established for each employee in the Technical Qualification Program.

APPROACH

- Interviewed the TQP lead at TDG regarding a training and qualification (T&Q) record keeping system.

- Reviewed a sample of electronic and hard copy records to verify:
  - That the centralized T&Q records system includes the required documents in accordance with Order 360.1, (e.g., equivalencies, exemptions, certifications, learning activities);
  - That employees are providing their T&Q documentation to the training office in a timely manner; and
  - That T&Q documents are being systematically processed in the records office to validate qualification.

DISCUSSION

The TQP lead maintains the TQP database of participants' assigned competencies and completion status. The records office in the Training Center, which maintains the LEARN education and training database along with the hardcopy records of every ORO employee, does not have access to the TQP database at this time, but does maintain paper copies of the TQP participants' TQRs.

As also noted in the 1997 Assessment Report, the TQP records are systematically organized and carefully stored in a central location with controls to ensure security and preclude damage and loss of documents. The records reviewed contained the required evidence and approval signatures of qualification.

The TQP lead, as a follow-up item from the 1997 TQP Assessment Report, continues to audit the hardcopy records folders to ensure their composition, consistency, and accuracy.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-4 Qualification Tailored to Work Activities: The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.
CRITERIA: 4.1 An analysis has been performed to identify the related knowledge, skill, and ability elements to accomplish the duties and responsibilities for each Technical Qualification Program functional area or position.

APPROACH

• Reviewed with the TQP lead at TDG and a sampling of participants to verify that an analysis has been conducted to select the appropriate competencies for each assigned functional area for each participant.

• Reviewed the process used for identifying program participants, how employees are assigned to the program and their functional areas approved, and the process of selecting specific learning activities to satisfy established competencies.

DISCUSSION

As noted in Criteria 2.4, the assignment (or identification) of competencies has been made based on the supervisor's best professional judgment by matching the basic and functional area standards with the candidate's job. An analysis to the level of knowledge, skill, and ability elements was not done, though the matching process accounted for the individual's specific job. A review of the sampled records indicates that TQP participants fulfilled the competencies based on the competency statement in the standard and not on the specific knowledge, skill, or ability. A notable exception to this is the approach taken by the Facility Representatives, whereby their study guides and qualification documentation incorporates the specific knowledge, skill, and ability statements found within each competency in the functional standards.

Again, as noted in Criteria 2.4, a review of TQP Tracker revealed that all but 40 participants' TQRs contain the three levels of standards, and 45 (28%) have more than just the general technical base, primary functional area, and O/F-S standards, which include secondary functional areas and multiple office and facility-specific competencies.

A review of TQP Tracker revealed that the prevalent fulfillment approach has been through the equivalency process. Where learning activities were identified, most participants have elected to self study and to attend training, according to interviews with participants and managers. This was confirmed during the review of records.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-4 Qualification Tailored to Work Activities: The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.
CRITERIA: 4.2 The program includes job-specific requirements related to the rules, regulations, codes, standards, and guides necessary to carry out the mission of the office.

APPROACH

• Verified that office and facility-specific (O/F-S) standard competencies and knowledge, skill and abilities (KSAs) address the applicable rules and regulations.

DISCUSSION

A sampling of the participant records revealed that knowledge or application of rules and regulations has been a common inclusion in the participants' O/F-S standards. For example, there are such requirements as "knowledge of environmental and waste management policies," "knowledge of DOE 151.1," and "demonstrate the ability to manage ORO projects in accordance with DOE Order 430.1."

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-4 Qualification Tailored to Work Activities: The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.
CRITERIA: 4.3 The program supports the mission needs of the office.

APPROACH

• Interviewed selected ORO senior managers to verify the flowdown of ORO mission requirements into the TQP.

DISCUSSION

Clearly, ORO senior management must assure that ORO mission requirements are flowed down into the TQP including the selection of standards and competencies for employees that assure their competence to carry out the mission. To assess whether these criteria are being met, several ORO senior managers were interviewed:

Jim Hall, Manager ORO
Ed Cumesty, Assistant Manager for Laboratories (AML)
Bob Dempsey, Assistant Manager for Defense Programs (AMDP)
Rod Nelson, Assistant Manager for Environmental Management (AMEM)
Bob Poe, Assistant Manager for Environment, Safety, and Quality (AMESQ)

These interviews revealed that senior managers feel that ORO mission requirements have flowed down into the TQP, and that the ORO TQP includes the identification of unique DOE and position-specific work activities, and the knowledge and skills necessary to accomplish that work. In essence, participant qualification standards are selected and tailored to work activities, and therefore, support the flowdown of mission requirements.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-5 Credit for Existing Technical Qualification Program(s): The program is structured to allow credit, where appropriate, for other technical qualification program accomplishments.
CRITERIA: 5.1 Credit (equivalency) is granted for previous training, education, experience and completion of related qualification/certification programs, where applicable.

APPROACH

- Reviewed and verified that an equivalency process is defined in the implementation guidance for the TQP.

- Checked the records to verify that equivalencies are granted.

DISCUSSION

As noted in Criteria 4.1, TQP Tracker revealed that the prevalent fulfillment approach has been through the equivalency process. This was confirmed during the sampling of the records.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-5 Credit for Existing Technical Qualification Program(s): The program is structured to allow credit, where appropriate, for other technical qualification program accomplishments.
CRITERIA: 5.2 Equivalency is granted based upon a review and verification of objective evidence such as transcripts, course certificates, test scores or on-the-job experience.

APPROACH

• Reviewed and verified the existence of adequate documentation for the previous training, education, experience, or certification to support the granted equivalencies.

DISCUSSION

TQP Tracker shows, as of this assessment, only 6 of 162 participants elected to not use equivalencies (and exemptions) as the fulfillment method for their competencies. For those participants using equivalencies, a review of the sampled TQP records revealed that equivalency documentation included college transcripts, federal government form SF-171 employment records, completed study guides, letters of commendation, and course completion certificates. All equivalency justifications found in the records were approved by the required two levels of management.

Equivalency justifications found in the sampled records are weak. With two notable exceptions, the justification and supporting documentation did not tie explicitly to the competency for which the equivalency was being taken. Similarly, the September 1997 assessment noted that the objective evidence to support justification for some equivalencies was inadequately articulated in the training and qualification record files.

OBSERVATIONS-FINDINGS

5.2-1   There is no guidance for participants and supervisors on what constitutes an acceptable equivalency justification.

RECOMMENDATION

5.2-1   TDG should develop guidance for participants and supervisors on what constitutes an acceptable equivalency justification.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-5 Credit for Existing Technical Qualification Program(s): The program is structured to allow credit, where appropriate, for other technical qualification program accomplishments.
CRITERIA: 5.3 Equivalencies are validated, approved and documented in a formal manner.

APPROACH

• Reviewed and verified that equivalencies are processed formally as outlined in the implementation guidance for the TQP.

• Reviewed and verified the consistency in management approvals (and disapprovals) and how well the equivalency recommendations are evaluated.

DISCUSSION

As noted during the September 1997 assessment, and shown in the sampled records, all equivalencies were documented, processed, and approved by the required two levels of management, as specified in DOE 360.1.

There is no evidence of any disapproved equivalency requests, though one would not expect to find any in the records, since only approved equivalencies are forwarded to the Training Center.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-5 Credit for Existing Technical Qualification Program(s): The program is structured to allow credit, where appropriate, for other technical qualification program accomplishments.
CRITERIA: 5.4 Exemptions are justified, approved and documented in a formal manner. Note: This is an added criteria to the ORO Phase I Assessment.

APPROACH

• Reviewed and verified the exemption documentation, including justifications and approvals.

DISCUSSION

The TQP Tracker shows that 20% (33/162) of the TQP participants have taken exemptions for the general technical base competencies, and 38% (61/162) for the applicable functional area standard competencies. All exemption justifications found in the sampled records were approved by the required two levels of management. The justification statements were, with one notable exception, weak; that is, the statements were very general, indicating, for example, that this competency was not applicable to the job. This is in contrast to stating how or why this competency is not applicable to the job.

With regard to the general technical base competencies, the *Revised Implementation Plan for DNFSB Recommendation 93-3* states "It is expected that these requirements will be applicable to all federal technical personnel." Though this implies that exemptions should not be made, the widespread use of exemptions at ORO indicates that the general technical base and functional area standards likely do not match the baseline and functional attributes of the job holders. Participants interviewed during this and the September 1997 assessment repeatedly pointed out that the baseline and functional area standards were by no means an exact fit to their jobs. To this end, ORO continues to take a graded approach to the assignment and tailoring of standards and competencies to a candidate's technical qualification record. Indeed, in the same section of the *Revised Implementation Plan for DNFSB Recommendation 93-3* as the above quotation, this plan states that the identification of necessary basic technical knowledge, technical discipline competencies, and position-specific knowledge, skills and abilities "will allow a flexible approach to meeting the principles of the Technical Qualification Program."

Confirmed in interviews with ORO senior management and TQP principals, ORO's graded approach to TQP implementation is consistent with the principles of the TQP and other DOE initiatives as integrated safety management and the business management oversight process.

OBSERVATIONS-FINDINGS

5.4-1   There is no guidance for participants and supervisors on what constitutes a good exemption justification.

RECOMMENDATION

5.4-1   TDG should develop guidance for TQP participants and supervisors on what constitutes a good exemption justification.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-6 Transportability: Competency requirements that are identified as having Department-wide applicability are transferable.
CRITERIA: 6.1 The program includes all of the competencies that have been identified as having Department-wide applicability.

APPROACH

- Reviewed a sampling of Individual Development Plans (IDPs) and Technical Qualification Records (TQRs) for these DOE-wide competencies.

DISCUSSION

As noted in Criteria 2.1 and 2.4, all TQP participants at ORO have engaged, as a minimum, general technical base and Department-wide functional area qualification standards. Exemptions of specific competencies have been taken in order to tailor these standards to an individual job position and incumbent-candidate.

With regard to the identification of specific competencies that have Department-wide applicability within the Department-wide functional area qualification standards, ORO continues to focus on the qualification and competency of ORO defense nuclear facility technical staff. According to the manager interviewed from Human Resources, should ORO hire a transfer from another DOE defense nuclear facility, that person's TQR would be reviewed for transferability at that time.

The sampled TQP records contain these standards.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-6 Transportability: Competency requirements that are identified as having Department-wide applicability are transferable.
CRITERIA: 6.2 Formal documentation of the completion of Department-wide competencies is maintained in a manner that will allow for easy transferability.

APPROACH

• Reviewed a sampling of participant records to check the inclusion of DOE-wide competency documentation.

• Checked for reciprocity given on transfers or promotions.

DISCUSSION

As was also noted during the 1997 assessment, the TQP records are systematically organized and carefully stored in a central location with controls to ensure security. Part of each TQP participant's record is the Technical Qualification Record (TQR), which by its organization would permit easy evaluation of transferability. Each TQR, maintained in hard copy and electronically, contains a listing of the applicable qualification standards with fulfillment actions, a corresponding list of exemption and/or equivalency justifications, and a list of competencies that have yet to be fulfilled.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-6 Transportability: Competency requirements that are identified as having Department-wide applicability are transferable.
CRITERIA: 6.3 The Technical Qualification Program is integrated with personnel-related activities such as positions descriptions, vacancy announcements, recruiting, and performance appraisals.

APPROACH

• Reviewed the requirements of the *Revised Implementation Plan for DNFSB Recommendation 93-3*.

• Reviewed with the Human Resources group how the TQP is integrated with personnel policies and activities.

• Traced through a sample of participants' files.

DISCUSSION

According to one manager at Human Resources (HR), position vacancy announcements incorporate a statement that the position may require qualification in accordance with the TQP. This is the only HR activity that integrates TQP. HR was involved or informed during the initiation of the TQP several years ago; however, their involvement has waned, primarily due to personnel actions being assumed by line management, such as performance appraisals and recruiting.

As noted in Criteria 1.1, the manager stated that, though they recognize the need for one, there is no standard operating procedure in HR that forwards personnel actions or changes to the TDG for incorporation into LEARN and TQP Tracker.

OBSERVATIONS-FINDINGS

6.3-1   There is a lack of a formal process for Human Resources (HR) to update TDG on personnel changes.

RECOMMENDATION

6.3-1   TDG and HR management should ensure that personnel actions are incorporated into the TQP and LEARN databases and training and development records.

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-7 Measurable: The program contains sufficient rigor to demonstrate compliance to the principles.
CRITERIA: 7.1 The technical competency of personnel who have completed the requirements of the Technical Qualification Program is adequate and appropriate.

APPROACH

- Of the participants who have completed their Individual Development Plans (IDPs) and Technical Qualification Records (TQRs), selected a sample to discuss their perceived competency with their supervisors.

- Prior to the interviews, checked the sample's records for completeness, consistency, and adequacy.

DISCUSSION

Interviews with a sample of supervisors of those persons whose records were sampled revealed that the competency of persons completing the TQP is not determined by the documentation but rather by performance on the job. This is as one would expect according to the supervisors.

The supervisors indicated that these graduates of the TQP are technically competent, but not as a result of their participation in the TQP. Specifically, the incumbents' competency is due to prior experience, training, and education. If there is a benefit of TQP, it is in the documentation of a job incumbent's prior experience, training, and education in showing how these factors relate to the job's performance requirements.

The supervisors monitor the job incumbents' performance either directly (as direct reports) or through subordinate first-line supervisors by observation or reviewing the incumbents' work products.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-7 Measurable: The program contains sufficient rigor to demonstrate compliance to the principles.
CRITERIA: 7.2 The Program allows for continuous feedback and periodic evaluation to ensure that it meets the needs of the Department and the mission(s) of the office.

APPROACH

• Reviewed the available feedback routes and mechanisms with the TQP lead at TDG.

• Verified these feedback mechanisms with TQP participants and managers. Reviewed some of the feedback.

• Reviewed the TQP guidance for formalization of the program evaluation, including procedure and periodicity.

• Reviewed the results of previous evaluations, including the implementation of corrective actions.

DISCUSSION

The former TQP lead at TDG had not issued the quarterly reports of the completion status to the TQP and ORO managers for several months prior to his departure from DOE. The transition of staff has delayed TDG's resumption of these quarterly reports.

According to the current TQP lead at TDG, managers, supervisors, and participants have always been encouraged to send electronic mail with queries about completion requirements and status. There are e-mail records in the file attesting to this process. In addition, in the months prior to the May 1998 completion deadline, six to seven managers and participants were checking weekly with the TQP lead on the status of their own and their subordinates' files.

As noted in the 1997 Assessment Report and from the current interviews, managers and supervisors were very active and involved in the establishment of the TQP, but as the program has matured and individuals completed their qualifications, the managers and supervisors' attention to the TQP has waned.

The 1997 TQP Assessment was conducted by TDG as part of its mission to conduct ongoing program evaluations, which also coincided with the requirement of DOE Order 360, *Training*, to conduct an assessment of the TQP every three years. The senior ORO managers were asked about the status of the recommendations in the 1997 Assessment Report. They indicated that they had forwarded the report to their subordinate managers for disposition. Beyond this, it appears that no formal actions have been taken by ORO on the recommendations for ORO management in the September 1997 Assessment. Some action has been taken by TDG on its recommendations, but, in both cases, no formal process was employed to track these apparent commitments.

OBSERVATIONS-FINDINGS

7.2-1   No formal trackable actions have been taken on the recommendations from the 1997 TQP Assessment Report.

RECOMMENDATION

7.2-1   ORO should review and respond to the recommendations of the 1998 and 1997 TQP Assessments.

CRITERIA MET (Y/N)

No

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT
OBJECTIVE: TQP-7 Measurable: The program contains sufficient rigor to demonstrate compliance to the principles.
CRITERIA: 7.3 The Program includes provisions for continuing training.

APPROACH

• Reviewed the TQP and Human Resource guidance for provisions for continuing training, particularly that training tied to the TQP; for example, incorporating identified qualification-support training into the training plan or schedule, and using a systematic method for screening technical courses to meet TQP competencies.

• Sampled the records to review whether participants' continuing training relates to their TQP Individual Development Plans (IDPs) and Technical Qualification Records (TQRs).

DISCUSSION

ORO Training Center staff (housed in the Federal Office Building) process all requests for training, including continuing training. The hard copy and electronic versions of the Training Request contain a query to the user, "Is this request related to a Technical Qualification Program requirement?" and a similar question relating to the IDP.

Of 17 sampled records, 14 persons attended continuing training that appeared (as determined by the course title on the LEARN printout) to be technical in nature. Technical courses included those that were part of the individual's TQP and those that related to a technical discipline. Excluded were annual refreshers, retirement planning seminars, supervisory and word processing skills courses, and general employee training. For 1998, the average continuing training hours were 27.4 for the sample. However, if one participant who had 230 hours in pursuit of a doctoral degree was excluded, the average is more representative at 14.75 hours.

The registration process for selecting continuing training to fulfill TQP requirements is specified on the TDG World Wide Web home page (and part of ORO's intranet). In addition, there are numerous examples where ORO organizations have requested TDG to identify and/or bring on site courses that would fulfill collective or singular TQP requirements.

OBSERVATIONS-FINDINGS

None

RECOMMENDATION

None

CRITERIA MET (Y/N)

Yes

IV.   Conclusions and Recommendations

The TQP program implementation at ORO continues to be satisfactory. Senior management has been involved in the program since its initial implementation in 1995. Managers and supervisors have a good working relationship with their supporting TDG organization, which has access to learning activities developed throughout the complex for use in meeting qualification competencies. The TDG Web site provides help to participants, and the TQP Tracker database, administered by TDG and loaded onto participants' computers, is a notable management tool for statusing and maintaining current the employees' qualification requirements. Program participants have completed their qualification on time and have received certificates of completion. There is a high level of confidence among managers and staff that the remaining program participants will meet the May 1999 and beyond scheduled completion dates.

The primary concern the assessment team has with implementation of ORO's TQP is the apparent lack of action in response to the 1997 TQP Assessment Report recommendations. The purpose of the self-assessment is to improve an organization's policies and practices. It is not clear that ORO management reviewed the recommendations for possible action and disposition. Other conclusions, including those that remain applicable from the 1997 Assessment, follow:

- The support to the TQP participants by the TDG was considered very positive by most interviewees and outstanding by others.

- In support of ORO management, TDG took a minimalist approach in formalizing by way of procedure how the site would implement the TQP. This approach was efficient, and is adequate for the short-term. However, the programmatic support today is very dependent on one person, and as recently occurred, the former TQP lead at TDG resigned from DOE.   This had generally minimal impact upon the administration of the TQP. This event notwithstanding, there still is the need for formal implementing guidance beyond that provided in the DOE and ORO orders.

- TQP participants are enrolling in few technical courses as part of their continuing training. For example, 16 of 17 sampled individuals whose records were reviewed for continuing training averaged about 15 hours of technical continuing training in 1998.

- The federal employees enrolled in the TQP possess impressive technical credentials. This is especially noted in the fact that all the participants whose records were reviewed hold engineering or science degrees. A large number have masters degrees, there are several Ph.D.s, and some have completed all their doctoral degree requirements except the dissertation. Secondly, the records show that a very high percentage of these people have been working for DOE or one of its contractors at ORO for many years, indicating a staff with extensive on-site experience and a relatively low turnover among the federal workforce in general. A number of people brought training and experience from other federal agencies, from the military, from the commercial nuclear industry, or a state agency.

- The direction provided from DOE Headquarters about which job positions should be included in the program and how best to determine selection was not considered to be adequate by many implementing organizations in the complex. ORO has enrolled about 28% (162/587) of its employees in the program. There has been considerable change in the enrollment over the past two years. And ORO management

expects to revisit the TQP constituency.

The following recommendations are gleaned from the detailed assessment sheets included in Section III of the report. Formal disposition of the recommendations should address those specifically shown in Section III, which are compiled in Paragraph C below.

A.   Recommendations for TDG as the Program Administrator at ORO

- Review the current administrative guidance to site organizations for managing this program and make needed changes; where appropriate, commit some of this guidance to formal procedure. Other guidance in TDG could include, for example, desk instructions.

- TDG and HR management should ensure that personnel actions are incorporated into the TQP and LEARN databases and training and development records.

- Continue to conduct periodic quality and content reviews of incoming documentation to the records center for technical accuracy, adequacy, completeness, and legibility. Return documents to the submitter for correction in instances when they do not meet the approved quality standards. TDG should update the TQP Tracker accordingly.

B. Recommendations for ORO Management

- Managers should review and respond to the recommendations to this and the 1997 Assessment Report.

- At the next opportunity, probably after the upcoming revision to DOE O 360.1, ORO should revise ORO 360 to give more specific direction on how TQP participants should be chosen.

- As the mission of ORO continues to evolve, ORO management should relook at TQP participation across ORO to assure that the correct employees are in the TQP.

C. List of the Specific Recommendations

1.1-1 At the next opportunity, probably after the upcoming revision to DOE O 360.1, ORO should revise ORO O 360 to give more specific direction on how TQP participants should be chosen.

1.1-2 As the mission of ORO continues to evolve, ORO management should relook at TQP participation across ORO to assure that the correct employees are in the TQP.

1.1-3 TDG and HR management should ensure that personnel actions are incorporated into the TQP and LEARN databases and training and development records.

1.1-4 TDG should audit all the TQP records and update the records and TQP Tracker accordingly.

1.2-1 TDG should formalize the TQP documentation updating process to ensure that assigned TDG staff can replicate the current process.

2.4-1 As the organizations review their constituency in the TQP (from Recommendation 1.1-2), ORO should reconsider the development and/or assignment of office/facility-specific standards.

3.1-1 ORO should define what position description and performance plan changes are needed for TQP participants and implement those needed changes through the local order system or written direction.

3.2-1 ORO should revise ORO O 360 to accurately define and portray the requirements of the TQP.

5.2-1 TDG should develop guidance for participants and supervisors on what constitutes an acceptable equivalency justification.

5.4-1 TDG should develop guidance for TQP participants and supervisors on what constitutes a good exemption justification.

6.3-1 TDG and HR management should ensure that personnel actions are incorporated into the TQP and LEARN databases and training and development records.

7.2-1 ORO should review and respond to the recommendations of the 1998 and 1997 TQP Assessments.

APPENDIX A
ORO TECHNICAL QUALIFICATION PROGRAM ASSESSMENT
ANNOUNCEMENT MEMORANDUM

Oak Ridge Operations Office

memorandum

DATE: September 8, 1998

REPLY TO
ATTN OF: AD-443.1:Vosburg

SUBJECT: TECHNICAL QUALIFICATION PROGRAM

TO: Distribution

An integral part of the recently revised Defense Nuclear Facilities Safety Board 93-3 Implementation Plan is to conduct a Phase I Assessment of the Technical Qualification Program. Over the next 2 weeks, a team will be evaluating the effectiveness of the Oak Ridge Operations Office (ORO) Technical Qualification Program. The team will consist of myself, a senior technical safety manager, a technical expert from ORO, and one from the Training and Development Group.

We will be supplementing the evaluation that was completed last September to which many of you contributed. When we have completed the evaluation, we will report the results of our efforts to you and Headquarters. We fully expect that the results will be used to enhance and improve our Program.

Please support this team as we reexamine our Technical Qualification Program. Thank you.

/s/

Steven D. Richardson
Deputy Manager

APPENDIX B
TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN			
Objectives and Criteria	**Assessment Approach and Sampling Activities**	**Data Sources**	**Usability of the 1997 Assessment* and '98 Ac**
TQP-1 Demonstration of Competence			*Note: The bracketed citation corres the Report criteria and findings (see the Report).
1.1 Participants identified	Review the documented selection process with ORO management. Review with selected managers how they assign employees to the program and approve their functional areas. Compare TQP roster with ORO organization chart. Check whether TQP roster is complete. Review and verify that competency completion statistics and documentation.	Selection procedure Roster and ORO organization chart Certificates of Completion signed by the office manager	[A.2] Check and verify the proce [B.3] Review again. Read the Re observations and conclusions.
1.2 IDPs etc. updated	Review the updating process with TQP lead at TDG. Check dates of electronic files and entry dates of records.	Updating practice Tracker files Hard copy records	[A.3, F.] Check and verify the pr [A.10,11] Spot check the files.
1.3 Technical competence is formally evaluated	Review the process for evaluating employees against the competencies with TQP lead at TDG. Review the process with selected ORO managers and with participants.	Competency evaluation procedure/practice Interviews	[A.5,7,8, B.1,3] Check and verify process. Re-interview a sampling of partic
TQP-2 Competency Levels			

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN			
Objectives and Criteria	**Assessment Approach and Sampling Activities**	**Data Sources**	**Usability of the 1997 Assessment* and '98 Ac**
2.1 Defined Knowledge, Skills, and Abilities (KSAs)	Review the basic, technical, and specific competencies and accompanying KSAs; and compare with industry standards. Interview a sampling of participants asking if their jobs fit the functional area standards.	Selected IDPs/TQRs Interviews	[A.3,8, B.1] Check TQP guidanc sample the records.
2.2 SMEs involved	Review how site position competencies are established and the use of subject matter experts with TQP lead at TDG. Review the process or requirements for developing local qualification standards with TQP lead at TDG. Discuss with selected SMEs their involvement in this process.	TQP practices Interviews	[A.8, B.1,3] Check how site competencies were established. (for a formal process. Interview managers on how the competencies were identified.
2.3 Related professional certifications	Review how professional certs. are incorporated into the IDPs/TQRs. Interview participants (e.g., IH, RP) if policy exists.	Records IDPs/TQRs Interviews	[B.1] Review TQP guidance and sampling of IDPs/TQRs.
2.4 Identified competencies in 3 areas	Review and verify that the basic, technical discipline, and Office and Facility-Specific (O/F-S) standards competencies have been developed, approved and assigned to TQP participants. Talk to TQP lead at TDG.	Standards development procedure or practice Interviews	[A.5, B.3] Check TQP guidance addressal of the 3 areas. Check sampling of IDPs and TQRs for inclusion of these areas. Check fo relevancy of assigned competenci
TQP-3 Plans and Procedures			
3.1 Senior management commitment	Review and verify with ORO senior management that they endorse and are committed to the TQP. Check the evidence of their commitment (e.g., staff memos, subordinates' performance plans.)	Interviews with ORO management Support documents and management directives	[A.1, B.1] Interview selected sen management, and verify the evide their commitment.

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN			
Objectives and Criteria	**Assessment Approach and Sampling Activities**	**Data Sources**	**Usability of the 1997 Assessment* and '98 Ac**
3.2 Defining procedures	Review and verify that the local implementation guidance, policies, or procedures defines the DOE requirements and TQP practices.	TQP guidance Interviews with TQP lead at TDG	[G.] Re-assess this criteria (espe since the TQP principal at TDG h left.)
3.3 Implementation roles & responsibilities defined	Review and verify that all roles and responsibilities are defined. Check TQP guidance. Sample participants and managers to verify their understanding of their roles, etc.	TQP guidance	[A.2] Re-assess this criteria.
3.4 Procedures are followed	Review and verify the general awareness and use of the local guidance for TQP implementation, with a sampling of participants.	TQP guidance Participant interviews Properly completed records and forms	[A.3,7, B.1, G.] Re-assess this cr
3.5 Training and Qualification (T&Q) records system	Review and verify that T&Q record keeping meets the needs of the participants and the program. Verify that the centralized T&Q records system includes the required documents in accordance with Order 360.1, (e.g., equivalencies, exemptions, certifications, learning activities). Verify that employees are providing their T&Q documentation to the training office in a timely manner. Verify that T&Q documents are being systematically processed in the records office to validate qualification.	Record keeping procedure and practices Participant interviews	[A.4,12] Check and verify the pr Sample records and electronic file adequacy and timely processing.
TQP-4 Qualification Tailored to Work Activities			

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN			
Objectives and Criteria	**Assessment Approach and Sampling Activities**	**Data Sources**	**Usability of the 1997 Assessment* and '98 Ac**
4.1 Needs analysis done	Review with TQP lead at TDG and a sampling of participants and verify that an analysis has been conducted to select the appropriate competencies for each assigned functional area for each participant. Review the process or requirements for developing O/F-S qualification standards with TQP lead at TDG. Review the process used for identifying program participants, how employees are assigned to the program and their functional areas approved, and the process of selecting specific learning activities to satisfy established competencies.	TQP guidance and practices Participant interviews	[A.3,7, B.1.3] Re-assess this crit
4.2 Rules and regulations applied to job-specifics	Verify that O/F-S standard competencies and KSAs address rules and regs.	Position standards IDPs/TQRs	[A.8, B.3, C.1] Check and verify through interviews and a review c records.
4.3 TQP supports ORO mission	Review and verify the flowdown of Oak Ridge Office mission requirements into the TQP. Check ORO mission statements and strategies, and senior manager commitment statements.	Interviews with senior management	[A.1, B.1] Re-assess this criteria
TQP-5 Credit for Existing Tech. Qual. Programs			
5.1 Equivalencies are granted	Review and verify that an equivalency process is defined in the implementation guidance for the TQP.	TQP guidance and practices	[A.9, E., G.] Check and verify.
5.2 Equivalencies are justified	Review and verify the existence of adequate documentation for the previous training, education, experience, or certification to support the granted equivalencies.	Participant Records	[E.] Re-assess this criteria.

TECHNICAL QUALIFICATION PROGRAM
PHASE I ASSESSMENT PLAN

Objectives and Criteria	Assessment Approach and Sampling Activities	Data Sources	Usability of the 1997 Assessment* and '98 Ac
5.3 Equivalencies are approved	Review and verify that equivalencies are processed formally as outlined in the implementation guidance for the TQP. Review and verify the consistency in management approvals (and disapprovals) and how well the equivalency recommendations are evaluated.	Participant Records Interviews with participants and managers	[E.] Re-assess this criteria.
5.4 Exemptions are justified and approved (THIS IS AN ADDED CRITERIA TO THE ORO PHASE I ASSESSMENT)	Review and verify the exemption documentation, including justifications and approvals.	Participant Records Interviews with participants and managers	[D.] Re-assess this criteria.
TQP-6 Transportability			
6.1 DOE-wide competencies identified	Review the process whereby DOE-wide competencies were identified. Review a sampling of IDPs/TQRs for these DOE-wide competencies.	TQP guidance IDPs/TQRs	Assess this criteria.
6.2 DOE-wide competencies documented	Review a sampling of participant records to check the inclusion of DOE-wide competency documentation. Check for accuracy, consistency, and completeness. Check for reciprocity given on transfers or promotions.	Participant TQP Records	Assess this criteria.
6.3 TQP integrated with HR	Review the requirements of the 93-3 Recast. Review with HR group how the TQP is integrated with personnel policies and activities. Trace through a sample of participants' files.	HR policies and practices Participant HR Records 93-3 Recast Plan	Assess this criteria.
TQP-7 Measurable			

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN			
Objectives and Criteria	**Assessment Approach and Sampling Activities**	**Data Sources**	**Usability of the 1997 Assessment* and '98 Ac**
7.1 TQP graduates are competent	Of the participants who have completed their IDPs/TQRs, select a sample to discuss their perceived competency with their supervisors. Prior to the interviews, check the sample's records for completeness, consistency, and adequacy.	TQP Records Participant interviews	[B.4,8, F.] Re-assess this criteria evidence this was being done in 1
7.2 TQP evaluation	Review the available feedback routes and mechanisms with the TQP lead at TDG. Verify these feedback mechanisms with TQP participants and managers. Review some of the feedback. Review the TQP guidance for formalization of the program evaluation, including procedure and periodicity. Review the results of previous evaluations, including the implementation of corrective actions.	TQP guidance	[A.6,12, B.5, G.] Re-assess this
7.3 Continuing training	Review the TQP and HR guidance for provisions for continuing training, particularly that tied to the TQP; for example, incorporating identified qualification-support training into the training plan or schedule, and using a systematic method for screening technical courses to meet TQP competencies. Sample the records to review whether participants' continuing training relates to their TQP IDPs/TQRs.	TQP and HR policies and practices	[C.3, G.] Re-assess this criteria.

TECHNICAL QUALIFICATION PROGRAM PHASE I ASSESSMENT PLAN			
Objectives and Criteria	**Assessment Approach and Sampling Activities**	**Data Sources**	**Usability of the 1997 Assessment* and '98 Ac**

Assignment of Criteria and Estimated Assessment Hours:
Steve Richardson - review and oversight of assessment activities
Jim Vosburg - review and coordination activities
Dennis Boggs - 1.1, 1.3, 3.1, 4.3, 7.1 = ~20 hours
Mike Henderson - 3.2, 3.3, 3.4, 3.5, 7.2 = ~24 hours
Rand Spinney - 1.2, 2.1, 2.2, 2.3, 2.4, 4.1, 4.2, 5.1, 5.2, 5.3, 6.1, 6.2, 6.3, 7.3 = ~48 hours

Team Agenda:

Day
-1   Team Meeting to confirm assessment plan and responsibilities
1   Entrance Meeting, begin assessment activities, conduct end-of-day team meeting
2-4 TDG-ORO Mgt. AM Briefing (as necessary), conduct assessment activities and end-of-day team meeting
5   TDG-ORO Mgt. AM Briefing (as necessary), complete primary assessment activities, conduct end-of-day team meeting
6   TDG-ORO Mgt. AM Briefing (as necessary), complete follow-up assessment activities, conduct end-of-day team meeting
7   TDG-ORO Mgt. AM Briefing (as necessary), assemble preliminary assessment findings, conduct end-of-day team meeting
8   TDG-ORO Mgt. AM Briefing (as necessary), assemble preliminary assessment findings, conduct end-of-day team meeting, produce (as 1
9   Exit Meeting

Post-Assessment Activities:
1.   Prepare the Phase I Assessment Report by 9/25/98.
2.   Revise the TQP Plan by 12/98.

APPENDIX C
RECORD REVIEW CHECKLIST

Name: **Date Reviewed:**
Position:
Supervisor(s):

Type	In Record (Y/N)	Complete, Dated, Approved (Y/N)	Adequate (Y/N)	Comments
TQR				
Current IDP				
Former IDP				
Exemption Justification				
Equivalency Justification				
Competencies: GTB DOE O/F-S				
Evidence of Completed Competencies				
Continuing Training				
Electronic Version Consistency:				
Notes:				

APPENDIX D
ASSESSMENT QUESTIONS FOR MANAGEMENT AND PARTICIPANTS

TQP Questions for ORO Senior Managers

1. What is your role and involvement in the Technical Qualification Program (TQP)?

2. How do the Oak Ridge Operations Office (ORO) mission requirements flow down into the TQP?

3. How would you characterize your commitment to the TQP? How do you endorse the TQP, and is there documentation to demonstrate your commitment (e.g., staff memos, subordinates' performance plans)?

4. How are personnel in your organization assigned to the TQP? How do you assign employees to the program and approve their functional areas? What process do you use to evaluate employees against the competencies?

5. How do you determine that a candidate has acquired a TQP competency?

6. How do you monitor your employees' progress toward qualification completion?

7. What confidence do you have that your people will meet the qualification completion schedule as required by the DOE Order?

8. How are your employees fulfilling their completion requirements (e.g., exemptions, equivalencies, courses, test-outs, self-study, etc.)?

9. One expectation within the program is to include TQP competencies in rewrites of the federal employee position descriptions. Has this been done in your organization, or are there plans to do so?

10. ORO performed a self-assessment of their TQP in 1997. Are you familiar with the assessment and has your organization implemented any of the recommendations?

Thank you for your time.

TQP Questions for ORO Supervisors and Managers

1. What is your personal involvement in the Technical Qualification Program (TQP)?

2. What is the flowdown of Oak Ridge Operations Office (ORO) mission requirements into the TQP? (Check ORO mission statements and strategies, and senior manager commitment statements.)

3. How would you characterize senior ORO management's commitment to the TQP? How about your own?

4. How are people in your organization assigned to the program? (Ask the managers how they assign employees to the program and approve their functional areas. Ask about the process for evaluating employees against the competencies.)

5. How do you determine that a candidate has acquired a TQP competency?

6. How do you monitor your employees' progress toward qualification completion?

7. What confidence do you have that your people will meet the qualification completion schedule as required by the DOE Order?

8. How are your employees fulfilling their completion requirements (e.g., exemptions, equivalencies, courses, test-outs, self-study, etc.)?

9. One expectation within the program is to include TQP competencies in rewrites of the federal employee position descriptions. Has this been done in your organization, or are there plans to do so?

10. What is your assessment of the support you are receiving from TDG?

11. What is your assessment of the TQP in terms of its worth and its effectiveness?

12. Is there anything else you would like to tell me about the program?

Thank you for your time.

TQP Questions for Program Participants

1. How were you assigned to the Technical Qualification Program (TQP)?

2. How close do the applicable DOE-wide functional area standards match your job?

3. What process was used to evaluate your knowledge and skills against the assigned TQP competencies?

4. How was your prior education and experience factored into your Individual Development Plan (IDP) and Technical Qualification Record (TQR)?

5. How were you involved in the development of the local (office/facility-specific) standards?

6. Describe the involvement of your supervisor in your qualification program.

7. What type of support do you get from Training and Development (TDG)?

8. How would you rate the support you receive from your supervisor and from TDG?

9. How quickly are your TQP records being updated?

10. How would you rate the TQP in terms of its worth and its effectiveness?

11. About what percent complete are you in the process of qualification completion (e.g., 25%, 50%, 70%, etc.)? How confident are you that you will finish your qualification according to schedule?

12. Is there anything else you would like to add about this program or your circumstances?

Thank you for your time.

APPENDIX E
PROGRAM STATUS AND SUPPORTING STATISTICS

The following descriptive statistics, as of September 15, 1998, were compiled by the TQP lead at TDG (at the request of the Assessment Team) from data generated by the TQP Tracker system. The purpose of assembling these statistics was to examine the overall status of TQP implementation.

Table 1: Overall ORO Implementation Completion Status by Scheduled Completion Date			
Completion Date	**Participants in Program**	**Average Percent Complete As of 5/31/98**	**Average Percent Complete As of 9/15/98**
May 1998	111	90.1	100
May 1999	46		69.2
Other	5		23.4
Total	162		89.4

Table 2: ORO Implementation Status by Organization by Scheduled Completion Date					
Organization	**Participants in Program**	**% 5/98**	**% 5/99**	**% Other**	**Average**
East Tennessee Technology Park	4	100	87.5	-	93.75
Emergency Management	2	100	62	-	81
Engineering Services	4	100	57.3	-	68
Environmental Restoration	6	100	95.5	66.7	93
Evaluation and Control	3	100	-	-	100
Human Resources	2	100	-	-	100
Manager, ORO	1	-	100	-	100
Nuclear Safety	11	100	80	-	96.4
ORNL Site Office	3	100	96	-	98.7
AM for Construction & Engineering	2	-	50	-	50
AM for Defense Programs	1	-	100	-	100
AM for ES&Q	3	-	93	-	93
AM for Environmental Management	1	-	100	-	100
Operations	15	100	80.3	-	96.1
Paducah Site Office	7	100	87	-	96.3
Portsmouth Site Office	10	100	85	-	97
Project Management	8	-	79.1	-	79.1
Safeguards and Security	31	100	-	-	100
Technical Support	15	100	62.5	-	95
Waste Management and Technology Development	8	100	100	-	100
Y-12 Site Office	25	100	38.6	50.5	69.0
Total	162	100	69.2	23.4	89.4

APPENDIX F
LIST OF ACRONYMS

AM	Assistant Manager	HQ	Headquarters (DOE)
AMDP	Assistant Manager for Defense Programs	HR	Human Resources (Division)
		IDP	Individual Development Plan
AMEM	Assistant Manager for Environmental Management	KSA	Knowledge, Skill, and Ability
		O/F-S	Office/Facility-Specific
AMESQ	Assistant Manager for Environment, Safety, and Quality	OJT	On-the-Job Training
		ORNL	Oak Ridge National Laboratory
AML	Assistant Manager for Laboratories	ORO	Oak Ridge Operations Office
DNFSB	Defense Nuclear Facilities Safety Board	SME	Subject Matter Expert
DOE	Department of Energy	T&Q	Training and Qualification
EH	Environment, Safety, and Health	TDD	Training and Development Division
EM	Environmental Management	TDG	Training and Development Group
GTB	General Technical Base	TQP	Technical Qualification Program
		TQR	Technical Qualification Record

APPENDIX G
EXECUTIVE SUMMARY FROM SEPTEMBER 1997 ASSESSMENT REPORT

Executive Summary

In response to the Defense Nuclear Facilities Safety Board Recommendation 93-3, *Improving DOE Technical Capability in Defense Nuclear Facilities Programs*, the Department of Energy adopted a formal qualification program in the 93-3 Implementation Plan. The Oak Ridge Operations Office (ORO) has selected roughly 170 of its Federal staff, including managers, supervisors, and individual contributors to participate in the program. The purpose of this assessment is to determine the ORO level of accomplishment in implementing its Technical Qualification Program (TQP) as specified through the requirements and guidance provided in DOE Order 360.1, *Training,* and ORO O 360, *Employee Education and Training*. The assessment scope includes a review and assessment of the processes used, the program decisions made, and the records and documentation associated with qualification implementation.

The basis for the assessment is derived from specific requirements in the Orders that provide role and responsibility assignments and specific programmatic application requirements that are contained in "shall" statements. The planned approach for this assessment featured three data collection methods: a program documents review, a records review, and TQP management and participant interviews. The information and data acquired has been analyzed, prioritized, and organized into the body of the report. In addition, examples of significant findings that support assessment conclusions are noted in the Appendices.

The TQP program implementation at ORO is satisfactory. Administration of the program by the Training and Development Division (TDD) is considered outstanding. Over 60 of the 170 program participants have completed their qualification and have received certificates of completion. There is a high level of confidence among managers and staff that program participants will meet the May 1998 scheduled completion date. The following conclusions, among others, are discussed further within the report.

The primary concern the assessment team had with implementation of ORO's TQP was the apparent lack of managers' one-on-one involvement with their participants to objectively determine specific capabilities related to the individual competencies. Other conclusions include the following:

- The Federal employees enrolled in the TQP possess impressive technical credentials.
- The records indicate a general lack of rigor in providing adequate objective evidence and specificity in documenting exemptions and equivalencies to satisfy individual competencies.
- A lack of understanding exists among a few ORO managers about the intended use of the General Technical Base Qualification Standard as witnessed by exemptions approved by these individuals.
- Three ORO organizations made a decision not to develop any office-specific qualification competencies.
- Some managers are slow to turn in their TQP enrollment and progress information to TDD.
- The TDD records procedure does not address the quality assurance review, receipt, disposition, retention, and retrieval of TQP-related records.

The recommendations shown below support the findings included in the body of the report. The first three are intended for TDD as the program administrator; the remainder of the recommendations are intended for ORO management.

Recommendations for TDD:

- Review the current administrative guidance to site organizations for managing this program and make needed changes. Provide procedure guidance, including quality acceptance standards for the receipt, disposition, and retrieval of training and qualification records.
- Conduct quality and content reviews of incoming documentation to the records center for technical accuracy, adequacy, completeness, and legibility. Do not accept into the records system those documents that do not meet the approved quality acceptance standards.
- Seek ways to provide some on-site formal courses for Paducah and Portsmouth TQP participants in accordance with their competency needs.

Recommendations for ORO Management:

- Conduct a self-assessment of the TQP implementation within each ORO organization. The self-assessment should also include a review of completed records as noted below.
- Conduct a content review of the TQP participants' records, especially the equivalency and exemption justifications and supporting evidence.
- The organizations that do not have office-specific qualification standards should reconsider this requirement. Document the outcome of the reconsideration and acquire the division manager's signature approval.
- Establish a means to ensure more timely communications with TDD about TQP participant enrollments, progress information, and enrollment and assignment changes resulting from reorganizations and employee transfers.

APPENDIX H
TECHNICAL QUALIFICATION PROGRAM
ASSESSMENT OBJECTIVES AND CRITERIA

TQP-1 **Demonstration of Competence:** The program clearly identifies and documents the process used to demonstrate employee technical competence.

Criteria

1.1   At a minimum, personnel providing management direction or oversight that could impact the safe operation of a defense nuclear facility have been identified as participants in the Technical Qualification Program.

1.2   Individual Development Plans (IDPs), training plans, technical qualification records, or other related documents are updated to reflect the activities that each individual shall participate in to satisfy competencies.

1.3   A formal evaluation process is in place to objectively measure the technical competency of personnel. The rigor of the evaluation process is commensurate with the responsibilities of the position.

TQP-2 **Competency Levels:** Competency requirements are clearly defined and consistent with applicable industry standards for similar occupations.

Criteria

2.1   Competency requirements include clearly defined knowledge, skill, and ability elements.

2.2   Subject matter experts are involved in establishing competency requirements.

2.3   Consideration of related professional certification requirements is included in the program as applicable.

2.4   Competency requirements are identified in the areas listed below (Note: this does not imply that three separate documents are required).

    C   Basic Technical Knowledge: This includes basic fundamental knowledge of radiation protection, occupational safety, chemical safety, nuclear safety, environmental regulations, and other areas.

    C   Technical Discipline Competency: Competency in a technical discipline (e.g., mechanical engineering, chemical engineering) which can be demonstrated by education, professional certification, examination or on-the-job performance.

     C   <u>Position Knowledge, Skills, and Abilities</u>: Specific to the position and the office.

TQP-3 **Plans and Procedures:** Plans and/or procedures are developed and implemented to govern the administration of the program.

    <u>Criteria</u>

    3.1   The Technical Qualification Program has the commitment of senior management.

    3.2   Written procedures that adequately define the processes and requirements to implement the Technical Qualification Program are in place.

    3.3   Roles and responsibilities for the implementation of the Technical Qualification Program are clearly defined and understood by all involved.

    3.4   The procedures that govern the implementation of the Technical Qualification Program are understood by all involved, and are being implemented as written.

    3.5   A training and qualification records system is established for each employee in the Technical Qualification Program.

TQP-4 **Qualification Tailored to Work Activities:** The program includes the identification of unique Department and position-specific work activities, and the knowledge and skills necessary to accomplish that work.

    <u>Criteria</u>

    4.1   An analysis has been performed to identify the related knowledge, skill, and ability elements to accomplish the duties and responsibilities for each Technical Qualification Program functional area or position.

    4.2   The program includes job-specific requirements related to the rules, regulations, codes, standards, and guides necessary to carry out the mission of the office.

    4.3   The program supports the mission needs of the office.

TQP-5 **Credit for Existing Technical Qualification Program(s):** The program is structured to allow credit, where appropriate, for other technical qualification program accomplishments.

    <u>Criteria</u>

    5.1   Credit (equivalency) is granted for previous training, education, experience and completion of related qualification/certification programs, where applicable.

5.2   Equivalency is granted based upon a review and verification of objective evidence such as transcripts, course certificates, test scores or on-the-job experience.

5.3   Equivalencies are validated, approved and documented in a formal manner.

5.4   Exemptions are justified, approved and documented in a formal manner. Note: This is an added criteria to the ORO Phase I Assessment.

TQP-6 **Transportability:** Competency requirements that are identified as having Department-wide applicability are transferable.

Criteria

6.1   The program includes all of the competencies that have been identified as having Department-wide applicability.

6.2   Formal documentation of the completion of Department-wide competencies is maintained in a manner that will allow for easy transferability.

6.3   The Technical Qualification Program is integrated with personnel-related activities such as positions descriptions, vacancy announcements, recruiting, and performance appraisals.

TQP-7 **Measurable:** The program contains sufficient rigor to demonstrate compliance to the principles.

Criteria

7.1   The technical competency of personnel who have completed the requirements of the Technical Qualification Program is adequate and appropriate.

7.2   The Program allows for continuous feedback and periodic evaluation to ensure that it meets the needs of the Department and the mission(s) of the office.

7.3   The Program includes provisions for continuing training.